

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 11

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte LAWRENCE P. KLEMANN  
and JOHN W. FINLEY

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Appeal No. 93-2111  
Application 07/630,452<sup>1</sup>

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ON BRIEF

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Before GRON, HANLON and WALTZ, Administrative Patent Judges.  
HANLON, Administrative Patent Judge.

**DECISION ON APPEAL**

This is an appeal under 35 U.S.C. § 134 from the final rejection of claims 1-23, all of the claims pending in the application. Claim 1 is illustrative of the subject matter on appeal and reads as follows:

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<sup>1</sup> Application for patent filed December 19, 1990. According to applicants, this application is a continuation-in-part of Application 07/336,821, filed April 11, 1989, now abandoned.

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1. A food composition comprising a fat mimetic comprising at least 35% by weight of the mixture of sucrose tetra- to hexa-fatty acid esters and at least one additional food material.

The references relied upon by the examiner are:

Mattson et al. (Mattson)	3,600,186	Aug. 17, 1971
Bernhardt (European Patent Application)	0 233 856	Aug. 26, 1987

The only issue in this appeal is whether claims 1-23 were properly rejected under 35 U.S.C. § 103 as being unpatentable over European Patent Application 233,856 (EPA '856) in view of Mattson. We cannot sustain the rejection.

The claimed subject matter is directed to a fat mimetic comprising at least 35% by weight of a mixture of sucrose tetra- to hexa- fatty acid esters in combination with at least one additional food material. According to appellants, many prior art fat substitutes are combined with anti-anal leakage agents to eliminate an undesirable laxative side effect caused by the fat substitutes. The claimed sucrose polyesters are said to eliminate the need for anti-anal leakage agents.

EPA '856 discloses a fat substitute comprising a mixture of sucrose fatty acid polyesters which is also said to avoid a laxative side effect without the use of anti-anal leakage agents

(p.11):

A characterizing feature of the sugar or sugar alcohol fatty acid polyesters useful in this invention is that they predominantly contain at least 4 fatty acid polyester groups. Sugar or sugar alcohol fatty acid polyester compounds that contain 3 or less fatty acid ester groups are digested in the intestinal tract much in the manner as ordinary triglyceride fats, but sugar or sugar alcohol fatty acid polyester compounds that contain four or more fatty acid ester groups are digested to a lesser extent and thus have the desired low calorie properties for use in this invention.

Highly preferred low calorie fat materials according to this invention are sucrose fatty acid polyesters. Preferred sucrose fatty acid polyesters have the majority of their hydroxyl groups esterified with fatty acids. Preferably at least about 80%, and most preferably at least about 95%, of the sucrose fatty acid polyesters are selected from the group consisting of octaesters, heptaesters and hexaesters, and mixtures thereof. Preferably, no more than about 35% of the esters are hexaesters or heptaesters, and at least about 60% of the sucrose fatty acid polyesters are octaesters. Most preferably, at least about 70% of the polyesters are octaesters.

Two sucrose polyester compositions prepared according to the invention disclosed in EPA '856 are illustrated in Table I

(p.23):

Example 1

Example 2

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<u>Ester Distribution</u>	<u>%</u>	<u>%</u>
Octa	94.5	79.0
Hepta	5.6	19.2
Hexa	0.0	1.8
Penta	0.1	0.1
<Penta	0.1	0.1

Mattson discloses (col. 1, lines 24-29):

[N]ovel fat-containing food compositions where the fat or a portion thereof comprises certain compounds which have the physical properties of ordinary triglyceride fat but which are comparatively less digested or absorbed and thus are relatively low in available calories.

The low calorie fat materials disclosed in Mattson are sugar or sugar alcohol fatty acid esters (col. 2, lines 39-40). According to Mattson (col. 3, lines 42-64):

[S]ugar or sugar alcohol fatty acid ester compounds that contain four or more fatty acid ester groups are digested to a lesser extent and thus have the desired low calories properties for use in this invention. It is not necessary that all of the hydroxyl groups of the sugar or sugar alcohol compound be esterified with fatty acid but it is preferable that the compound contain no more than 2 unesterified hydroxyl groups. Most preferably, all of the hydroxyl groups of the sugar or sugar alcohol are esterified with fatty acid, i.e., the compound is substantially completely esterified. . . .

. . . . Sucrose tetra fatty acid ester would be suitable but is not preferred

because it has more than 2 unesterified hydroxyl groups. Sucrose hexa fatty acid ester would be preferred because it has no more than 2 unesterified hydroxyl groups. An example of a highly preferred compound in which all of the hydroxyl groups are esterified with fatty acid is sucrose octa fatty ester.

The examiner maintains that (Answer, pp.2-3):

Appellants' claims differ in the amount of sucrose esters within the food product and the distribution of the partially esterified sucrose esters within the blend of sucrose esters. It would have been obvious to one of ordinary skill in the art at the time the invention was made to alter the composition of the sucrose polyester of EPA '856 to obtain the composition as claimed because it is well known in the art that sucrose esters that are only partially esterified are digestible. The lower the number of fatty acids esterified onto the sucrose molecule, the greater its digestibility. See Mattson et al., column 3, line 36 - column 4, line 8.

We agree with appellants that the combined teachings of EPA '856 and Mattson lead one away from the claimed invention. Both EPA '856 and Mattson would have taught one of ordinary skill in the art that sucrose octa fatty acid esters, and at least hepta fatty acid esters, are most preferred for use as fat substitutes due to their decreased absorbability, and thus lower caloric content. See Gillette Co. v. S.C. Johnson & Son, Inc., 919 F.2d 720, 724, 16 USPQ2d 1923, 1927 (Fed. Cir. 1990) (the closest

prior art reference "would likely discourage the art worker from attempting the substitution suggested");

To the extent that Mattson teaches "that as the number of ester groups increase there was a decrease in absorbability" (col. 6, lines 20-21), this teaching fails to render the claimed invention obvious. Rather, this teaching is consistent with the less absorbed sucrose octa esters chosen by Mattson as the "highly" preferred embodiment of the invention.

Without the benefit of appellants' disclosure, one of ordinary skill in the art would not have been motivated to lower the number of fatty acids esterified onto the sucrose molecule, thereby increasing the absorbability and caloric content of the fat substitute. Rather, one of ordinary skill in the art presented with the combined teachings of EPA '856 and Mattson would have been motivated to do the direct opposite, i.e., increase the number of fatty acids esterified onto the sucrose molecule to produce a less absorbable, lower calorie fat substitute. Therefore, the examiner has failed to establish a prima facie case of obviousness under 35 U.S.C. § 103. See also In re McLaughlin, 443 F.2d 1392, 1395, 170 USPQ 209, 212 (CCPA 1971) (a proper judgment of obviousness "takes into account only knowledge which was within the level of ordinary skill at the

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time the claimed invention was made and does not include  
knowledge gleaned only from applicant's disclosure"); In re

Gorman, 933 F.2d 982, 987, 18 USPQ2d 1885, 1888 (Fed. Cir. 1991)  
(in a determination under 35 U.S.C. § 103 it is impermissible to  
simply engage in a hindsight reconstruction of the claimed  
invention, using the applicant's structure as a template and  
selecting elements from references to fill the gaps; the  
references themselves must provide some teaching whereby the  
applicant's combination would have been obvious).

The decision of the examiner is reversed.

**REVERSED**

TEDDY S. GRON  
Administrative Patent Judge

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	)	BOARD OF PATENT
ADRIENE LEPIANE HANLON	)	
Administrative Patent Judge	)	APPEALS AND
	)	
	)	INTERFERENCES
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